Amendments of the Claims:

A detailed listing of all claims in the application is presented below. This listing of claims will replace all prior versions, and listings, of claims in the application. All claims being currently amended are submitted with markings to indicate the changes that have been made relative to immediate prior version of the claims. The currently amended is Claims 1, 5, 8 and 12. Claims 15 - 24 are New. The changes in any amended claims are being shown by strikethrough (for deleted matter) or underlined (for added matter).

1. (Currently amended) A method for converting an input image with a plurality of pixels to an output image using an N-dimensional conversion table with a plurality of nodes, the method comprising the steps of:

providing an input image with a plurality of pixels;

converting the input image to an output image using an N-dimensional conversion table with a plurality of cubes each having a plurality of nodes, the N-dimensional conversion table being composed of a plurality of at least four subsets of cubes having nodes with each subset containing color information adapted to be simultaneously obtained;

storing odd-indexed nodes and even-indexed nodes respectively on separate ~~RAMS~~ memory components for each dimension of the conversion table;

retrieving for each pixel a set of output color values corresponding to nodes adjacent to the pixel in the conversion table; and

interpolating within each set of output color values to produce the output image;

thereby expediting input image conversion using a single access of memory for interpolation of data points.

2. (Original) The method according to claim 1 wherein each pixel has N color components.

3. (Original) The method according to claim 2 wherein each color component allocates bits for indexing into the conversion table.

4. (Original) The method according to claim 2 wherein each color component allocates bits for interpolation.

5. (Currently amended) The method according to claim 1 wherein the set of output values are capable of being simultaneously accessed from the ~~RAMS~~ memory components.

6. (Original) The method according claim 1 wherein the input image is in the RGB color space.

7. (Original) The method according to claim 1 wherein the output image is in the CMYK color space.

8. (Currently amended) An apparatus for converting an input image with a plurality of pixels to an output image using an N-dimensional conversion table with a plurality of nodes, the apparatus comprising:

a set of at least three ~~RAMS~~ memory components for storing separately odd-indexed nodes and even-indexed nodes respectively for each dimension of the conversion table, wherein the conversion comprises a plurality of cubes each having a plurality of nodes;

means for retrieving for each pixel a set of output color values corresponding to nodes adjacent to the pixel in the conversion table; and

means for interpolating within each set of output color values to produce the output image.

9. (Original) The apparatus according to claim 8 wherein each pixel has N color components.

10. (Original) The apparatus according claim 9 wherein each color component allocates bits for indexing into the conversion table.

11. (Original) The apparatus according to claim 9 wherein each color component allocates bits for interpolation.

12. (Currently amended) The apparatus according to claim 8 wherein the set of output values are capable of being simultaneously accessed from the set of ~~RAMS~~ memory components.

13. (Original) The apparatus according to claim 8 wherein the input image is in the RBG color space.

14. (Original) The apparatus according to claim 8 wherein the output image is in the CMYK color space.

15. (New) The method according to claim 1, wherein said memory components are random access memory (RAM).

16. (New) The method according to claim 15, wherein said RAM is battery-backed static RAM.

17. (New) The method according to claim 1, wherein said memory components are non-volatile memory components.

18. (New) The method according to claim 17, wherein said non-volatile memory components are MRAMs (Magnetic RAM).

19. (New) The method according to claim 17, wherein said non-volatile memory components are PRAMs (Phase-change RAM).

20. (New) The method according to claim 17, wherein said non-volatile memory components are FeRAMs.

21. (New) The apparatus according to claim 8, wherein said memory components are random access memory (RAM).

22. (New) The apparatus according to claim 21, wherein said RAM is battery-backed static RAM.

23. (New) The apparatus according to claim 8, wherein said memory components are non-volatile memory components.

24. (New) The apparatus according to claim 23, wherein said non-volatile memory components are selected from the group consisting of MRAMS (Magnetic RAM), PRAMs (Phase-change RAM), FeRAMs.